

AMENDMENTS TO THE CLAIMS:

Claims 1-27 have been deleted without prejudice or disclaimer. Claims 37-46 are added. The following is the status of the claims of the above captioned application, as amended.

28 (New). A process for producing a soluble starch hydrolysate, the process comprising subjecting an aqueous granular starch slurry at a temperature below the initial gelatinization temperature of said granular starch to the action of a first enzyme and a second enzyme, which first enzyme;

(a) is a member of the Glycoside Hydrolase Family 13;

b) has alpha-1,4-glucosidic hydrolysis activity, and;

(c) comprises a functional Carbohydrate-Binding Module (CBM) belonging to CBM Family 20, which CBM has an amino acid sequence having at least 60% homology to an amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, and SEQ ID NO:3;

and which second enzyme is selected from the list comprising a fungal alpha-amylase, a beta-amylase, and a glucoamylase.

29 (New). The process of claim 28, wherein the starch slurry has 20-55% dry solids granular starch.

30 (New). The process of claim 28, wherein at least 85% of the dry solids of the granular starch is converted into a soluble starch hydrolysate.

31 (New). The process of claim 28, comprising subjecting the granular starch slurry to the action of an isoamylase or a pullulanase.

32 (New). The process of claim 28, wherein the temperature is at least 58°C.

33 (New). The process of claim 28, wherein the pH is in the range of 3.0 to 7.0.

34 (New). The process of claim 28, wherein the soluble starch hydrolysate has a DX of at least 94.5%.

35 (New). The process of claim 28, wherein the granular starch is obtained from tubers, roots, stems, whole grain, corn, cobs, wheat, barley, rye, milo, sago, cassava, tapioca, sorghum, rice or potatoes.

36 (New). The process of claim 28, wherein the granular starch is obtained from dry milling of whole grain or from wet milling of whole grain or from milled corn grits.

37 (New). The process of claim 28, wherein the process is conducted in an ultrafiltration system and where the retentate is held under recirculation in presence of enzymes, raw starch and water and where the permeate is the soluble starch hydrolysate.

38 (New). The process of claim 28, wherein the process is conducted in a continuous membrane reactor with ultrafiltration membranes and where the retentate is held under recirculation in presence of enzymes, raw starch and water and where the permeate is the soluble starch hydrolysate.

39 (New). The process of claim 28, wherein the process is conducted in a continuous membrane reactor with microfiltration membranes and where the retentate is held under recirculation in presence of enzymes, raw starch and water and where the permeate is the soluble starch hydrolysate.

40 (New). A process for production of high fructose starch-based syrup (HFSS), wherein a soluble starch hydrolysate of the process of claim 28 is subjected to conversion into high fructose starch-based syrup (HFSS), such as high fructose corn syrup (HFCS).

41 (New). A process for production of a fermentation product, wherein a soluble starch hydrolysate of the process of claim 28 is subjected to fermentation into a fermentation product, such as citric acid, monosodium glutamate, gluconic acid, sodium gluconate, calcium gluconate, potassium gluconate, glucono delta lactone, sodium erythorbate, itaconic acid, lactic acid, gluconic acid; ketones; amino acids, glutamic acid (sodium monoglutamate), penicillin, tetracyclin; enzymes; vitamins, such as riboflavin, B12, beta-carotene or hormones.

42 (New). A process for production of fuel or potable ethanol, wherein a soluble starch hydrolysate of the process of claim 28 is subjected to fermentation into ethanol.

43 (New). The process of claim 40, wherein the fermentation step is carried out simultaneously or separately/sequential to the hydrolysis of the granular starch.

44 (New). The process of claim 28, wherein the process is conducted in an ultrafiltration system where the retentate is held under recirculation in presence of enzymes, raw starch, yeast, yeast nutrients and water and where the permeate is an ethanol containing liquid.

45 (New). The process of claim 28, wherein the process is conducted in a continuous membrane reactor with ultrafiltration membranes and where the retentate is held under recirculation in presence of enzymes, raw starch, yeast, yeast nutrients and water and where the permeate is an ethanol containing liquid.

46 (New). The process of claim 28, wherein the starch slurry is being contacted with a polypeptide comprising a CBM, but no catalytic module, i.e. a loose CBM.